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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,095	07/20/2005	Jeremy Bowman	09294-020US1	3292

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MINNEAPOLIS, MN 55440-1022

EXAMINER
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WOOD, ELLEN S

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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02/03/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PATDOCTC@fr.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/525,095	<b>Applicant(s)</b> BOWMAN, JEREMY	
	<b>Examiner</b> ELLEN S. WOOD	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/19/2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7,8,12-15,19-21,23,24,26 and 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,8,12-15,19-21,23,24,26 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-4, 7-8, 12-15, 19-21, 23-24, 26 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jarvenkyla et al. (US 5,759, 461, hereinafter "Jarvenkyla") in view of Flick (*Plastics Additives - An Industrial Guide (2<sup>nd</sup> Edition)*).

Jarvenkyla discloses a multi-layer plastic pipe (col. 1 line 7). The multi-layer plastic pipe has a surface layer that provides a protective layer around a pipe (col. 2 lines 19-22). The protective outer layer is made to easily detach from the core pipe by simple means, either wholly or only at the joint surfaces, such as the pipe ends (col. 2 lines 26-29). The outer layer may also have an adhesion enhancing or inhibiting agent mixed in with the material depending on the use and the materials selected for the outer layer and core pipe (col. 3 line 49-55). The protective outer layer can be made from polypropylene mixed with a wax and the core pipe is made from polyethylene (col. 3 lines 63-65). It is known to one of ordinary skill in the art that wax is an ester of fatty acids. The pipe formed is stiffer, stronger, and is protected against scratching (col. 1 lines 43-46).

When a single layer pipe is formed, often fillers must be mixed with the plastic material which reduces the mechanical properties and weldability of the pipe (col. 1

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lines 51-55). In a two-layer pipe according the present invention, the properties of the core pipe or conducting pipe are optimized for the conduction of fluids, and the outer layer is designed to resist any external conditions and stress (col. 1 lines 55-59).

The core pipe is coated with a surface layer by coextrusion (col. 2 lines 19-20). Co-extrusion dies were used to form the plastic pipes (col. 2 lines 22-25). The surface of the outer layer is moderately hard, whereby it has a low adhesion, and the structure of the layer is moderately stiff, whereby the outer layer can be detached from the pipe (col. 2 lines 31-36), thus the outer layer prevents undesired movement between the skin layer and the core, but the layer can still be removed and provide impact strength of the inner layer.

Jarvenkyla is silent with the adhesion reducing additive, the amount of reducing additive used and the characteristics of the pipes.

Flick discloses in Section XXIV – Waxes that glycerol monostearate is widely used in polyolefins as a lubricant, anti-static and anti-fogging agent (waxes 927). A lubricant is defined to one of ordinary skill in the art as an agent that reduces the attraction (adhesion or cohesion) of the polymer. Glycerol monostearate is a wax. Thus, it would be obvious to one of ordinary skill in the art to combine glycerol monostearate as the wax component in the polypropylene outer layer of Jarvenkyla, because the addition of glycerol monostearate would aid in reducing the adhesion of the outer removable skin layer to the inner core layer of the plastic pipe.

It would be obvious to one of ordinary skill in the art that the amount of adhesion-reducing additive in the skin layer would be discovered by routine experimentation. The

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amount added to the skin would provide a composition that is optimal when the intended use of the resin composition is for protection and removable qualities when applied to a pipe. The mechanical characteristics of the layer would be dependent on the intended use of the skin layer, such as in a pipe the mechanical strength of the skin layer would need to be increased. The adhesive bond between the skin layer and the inner core layer of 0.2 N/mm to 2.0 N/mm would be discovered by routine experimentation of the amount of the adhesive component added to the composition to discover optimal conditions for a pipe as to not cause premature unwanted peeling of the skin layer, but still allow the outer skin layer to be detached when appropriate.

### ***Response to Arguments***

3. Applicant's arguments filed 11/19/2009 have been fully considered but they are not persuasive.

4. The applicant argues that Jarvenkyla only discloses a low molecular weight polyethylene wax as the material to be mixed with the outer layer.

In response, Jarvenkyla discloses that during the formation of the pipe it is possible to introduce an adhesion inhibiting or enhancing agent, depending on the use and the materials selected (col. 3 lines 49-51). Jarvenkyla also discloses that the outer layer is made from polypropylene mixed with a wax (col. 3 lines 63-65). Thus, Jarvenkyla discloses that general purpose waxes may be used in the mixture of the outer layer. Flick discloses in Section XXIV – Waxes that glycerol monostearate are used in polyolefins as a lubricant, anti-static and anti-fogging agent (waxes 927). Flick

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demonstrates that it is known to one of ordinary skill in the art that glycerol monostearate are used in polyolefin materials as a lubricant. Jarvenkyla also states that if the outer layer is formed from a polypropylene mixed with wax, the outer layer is easy to detach from the core pipe (col. 3 lines 63-65). According to one of the exemplary rationales that support a conclusion of obviousness, it states; combining prior art elements according to known methods to yield predictable results. It has been established in the prior art that glycerol monostearate is used in polyolefin materials as a lubricant, thus it would be obvious to combine the prior art elements of Flick with the known methods of Jarvenkyla to yield predictable results of proper detachable characteristics of the pipe.

The applicant states that only impermissible hindsight reconstruction would provide a basis for the proposed combination of references. However, Jarvenkyla states that when the outer layer is formed from a polypropylene mixed with wax, the outer layer is easy to detach from the core pipe (col. 3 lines 63-65). Thus, this statement prompts the examiner to look to the prior art to establish an appropriate wax that would be used as a lubricant in polyolefin materials. Flick discloses that glycerol monostearates are used in polyolefins in lubricants. Thus, it would not be impermissible hindsight reconstruction, because Jarvenkyla discloses the broad scope of using a polyolefin mixed with wax to provide a layer that easily detaches.

The applicant does not provide any factual evidence to state why the adhesive bond between the skin layer and inner core layer would not be discovered by routine experimentation or how the adhesive bond between the skin layer and the inner core

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layer of 0.2 N/mm to 2.0 N/mm results in unexpected results. It is well-settled that unsupported arguments are not a substitute for objective evidence. *In re Pearson*, 494 F.2d 1399, 1405, 181 USPQ 641, 646 (CCPA 1974).

For at least these reasons, the examiner maintains the rejection.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on M-F 730-5 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rena L. Dye/  
Supervisory Patent Examiner, Art Unit 1794